

REMARKS

The last Office Action has been carefully considered.

It is noted that claims 1-2 are rejected under 35 U.S.C. 102(a) over the patent to Heany.

Claim 3 is rejected under 35 U.S.C. 103(a) over the patent to Heany in view of the patent to Hakotani.

Also, claims 1-3 are rejected under 35 U.S.C. 112.

In connection with the Examiner's rejection of the claims under 35 U.S.C. 112, it is respectfully submitted that the Examiner's statement about the temperatures required for sintering of ceramic objects is completely accurate. Definitely, the temperature mentioned in the specification, namely 150°C-300°C is absolutely insufficient for producing ceramics. However, the Examiner's attention is respectfully directed to the fact that the present invention does not deal with producing ceramic objects or sintering of ceramics. As disclosed in the specification, and in particular on page 6, the initial mixture can include a base of butadiene nitril rubber, a curing agent sulfur, a softener dibutylphthalate, polyvinyl chloride, hardener, phenolic resin and a powder composed of particles of $Al(OH)_3$. These initial

materials are not suitable for producing ceramics, the treatment is not suitable for producing ceramic articles, and resulting product is not a ceramic product. The temperature 150°C-300°C is the temperature range which has been used for making of the tools in accordance with the present invention, that were produced in Universal Photonics, Inc. and successfully tested, and utilized. An Affidavit of Mr. A. Cooper who is an expert in this field is submitted to confirm that this is a range which has been practically used for producing the tools in accordance with the present invention.

The Examiner's arguments related to manufacture of ceramics are greatly appreciated, and it is nevertheless respectfully requested to withdraw the Examiner's rejection of the claims under 35 U.S.C. 112 because the present invention does not deal with manufacture of ceramics.

After carefully considering the Examiner's grounds for the rejection of the claims over the art, applicant has canceled the original claims and submitted a new set of claims including claim 5, the broadest claim on file. Claim 5 specifically defines that in the method of producing an abrasive tool, a mixture of initial components with particles of $\text{Al}(\text{OH})_3$ is made, a blank of the abrasive tool is formed from the mixture, and then abrasive particles of $\text{Al}(\text{OH})_3$ are produced in the blanks, or in other words the final tools by a heat treatment, such that the particles of $\text{Al}(\text{OH})_3$ are converted into abrasive particles of $\text{Al}(\text{OH})_3$ which are the sole abrasive particles in the tool.

In other words, all other components of the initial mixture and of the tool have no abrasive function whatsoever, and only the abrasive particles of $\text{Al}(\text{OH})_3$ are the abrasive particles of the tool and they are produced by converting $\text{Al}(\text{OH})_3$ into Al_2O_3 by heat treatment.

Turning now to the references and in particular to the patent to Heany, it can be seen that it does not teach with a single word a method of manufacture of a tool in which the only abrasive particles of Al_2O_3 are produced by heat conversion of $\text{Al}(\text{OH})_3$ into Al_2O_3 . As can be seen from examples, for example in column 2 of the reference, the final products include SiO_2 , Fe_2O_3 , TiO_2 , and Al_2O_3 which all constitute very hard materials. When in the patent to Heany other abrasive particles are introduced in the initial mixture, during rolling they will damage the rolls which is exactly what applicant eliminated by his invention.

Thus, neither the method of manufacture nor the final product does not contain Al_2O_3 as sole abrasive particles produced by conversion of $\text{Al}(\text{OH})_3$ into Al_2O_3 . However, this is the main feature of the present invention. As explained in the specification if Al_2O_3 particles are used in the initial mixture, then during corresponding rolling the equipment is damaged by these hard particles. In order to avoid it, $\text{Al}(\text{OH})_3$ is introduced as a source of the only abrasive particles, namely Al_2O_3 in the final tool.

It is believed that the new features of the present invention which are defined in claim 5 are not disclosed in the patent to Heany and also can not be derived from it as a matter of obviousness.

The Examiner's attention is respectfully directed to the features of claim 6 which clearly shows that the mixture of the initial material does not have any abrasive powder-producing components with the exception of $\text{Al}(\text{OH})_3$, and therefore claim 6 should also be considered as patentably distinguishing over the art as well and should be allowed.

The original claims were rejected over the patent to Heany under 35 U.S.C. 102(b) as being anticipated. In connection with this, it is believed to cite the decision in *re Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984) in which it was stated:

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim."

Definitely, the method disclosed in the reference does not include each and every element of the method of the present invention, and therefore the anticipation rejection should be considered as no longer tenable with respect to claims 5 and 6.

Claim 3 was rejected by the Examiner as being obvious over the combination of the patents to Heany and Hakatani. None of the references teaches the new features of the present invention as defined in claims 5 and 6. In order to arrive at the applicant's invention from the references, it is not enough to combine them, which is not obvious in itself, but instead it would be necessary to add to the combination the new features of the present invention which are now defined in claims 5 and 6. However, it is known that in order to arrive at a claimed invention, by modifying the references the cited art must itself contain a suggestion for such a modification.

This principle has been consistently upheld by the U.S. Court of Customs and Patent Appeals which, for example, held in its decision in *Randol and Redford* (165 USPQ 586) that


Prior patents are references only for what they clearly disclose or suggest; it is not a proper use of a patent as a reference to modify its structure to one which prior art references do not suggest.

In view of the above presented remarks and amendments, it is believed that the present application should be considered as allowable, and such action is earnestly solicited.

Reconsideration and allowance of the present application is most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 631-243-3818).

Respectfully submitted,


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